

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 June 2004 (24.06.2004)

PCT

(10) International Publication Number
WO 2004/053130 A1

BEST AVAILABLE COPY

- (51) International Patent Classification⁷: C12N 15/29 (74) Agent: JANG, Seongku; 19th Fl., KBC Building, #275-7., Yangjae-dong, Seocho-ku, Seoul 137-130 (KR).
- (21) International Application Number: PCT/KR2003/002693 (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 9 December 2003 (09.12.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/431,892 9 December 2002 (09.12.2002) US (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (71) Applicant (*for all designated States except US*): TOOL-GEN, INC. [KR/KR]; Daedeok Biocommunity, 461-6, Jeonmin-dong, Yuseong-gu, 305-390 Daejeon (KR).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): KIM, Jin-Soo [KR/KR]; #202, Jeonmin-dong 299-8, Yuseong-gu, 305-390 Daejeon (KR). SHIN, Hyun-Chul [KR/KR]; Expo Apt. 407-1704, Jeonmin-dong, Yuseong-gu, 305-390 Daejeon (KR). KWON, Heung-Sun [KR/KR]; Sangroksu Apt. 103-1508, Mannyun-dong, Seo-gu, 302-781 Daejeon (KR).
- Published:
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: REGULATORY ZINC FINGER PROTEINS

GAATTCTGTGCCCTCACTCCCTGGATCCCTGGGCAAAGCCCCAGAGGGAACACAAACAGTTGTTGTGA
ACACACCTTGCTGGGTACCACCATGGAGGACAGTTGGCTTATGGGGGTGGGGGTGCCTGGGGCCACGGA
GTGACTGGTGATGGCTATCCCTCCTTGGAAACCCCTCCAGCCTCCTCTTAGCTTCAGATTGTTTATTTGT
TTTTTACTAAGACCTGCTCTTTTCAGGTCTGTTGGCTCTTTTAGGGGCTGAAGAAGCCGAGTTGAGAAGG
GATGCAAGGGAGGGGGCCAGAATGAGCCCTTAGGGCTCAGAGCCTCCATCCTGCCCAAGATGTCTACAG
CTTGTGCTCCTGGGGTGCTAGAGGCGCACAAAGGAGGAAAGTTAGTGGCTTCCCTTCCATATCCCGTTTAT
CAGCCTAGAGCATGGAGCCAGGTGAGGAGGCTGCCTGGGAGGGGGCCCTGAGCCAGGAAATAACATT
TACTAAGTGTACAAAGACCTTGTCCCTGCTGCTGGGAGCCTGCCAAGTGGTGAGACAGGACTAGTGCA
CGAATGATGGAAGGGAGGGTGGGGTGGGTGGGAGCCAGCCCTTTTCTCATAAGGGCCTTAGGACACC
ATACCGATGGAAGTGGGGTACTGGGGAGGTAAGCTAGCACCTCCACCAAACACAGCAACATGTGCTGA
GGATGGGGCTGACTAGGTAAGCTCCCTGGAGCGTTTGGTTAAATTGAGGAAATTGCTGCATTCCCAT
CTCAGTCCATGCCCTCCACAGAGGCTATGCCAGCTTAGGAGCCAGCCCTGGCAAGATCTGGGTGGATAATC
AGACTGACTGGCCTCAGAGCCCCAAGTTGTTCCCTGGGGCAGCCTGGAAATAGCCAGGTCAGAAACCAG
CCAGGAATTTTCCAAGCTGCTTCCTATATGCAAGAATGGGATGGGGGCTTTGGGAGCACTTAGGGAAG
ATGTGGAGAGTTGGAGGAAAAGGGGGCTTGGAGGTAAGGGAGGGGACTGGGGGAAGGATAGGGGAGAAGC
TGTGAGCCTGGAGAAGTAGCCAAGGGATCCTGAGGGAATGGGGAGCTGAGACGAAACCCCATTTCTAT
TCAGAAGATGAGCTATGAGTCTGGGCTTGGGCTGATAGAAGCCTTGGCCCCCTGGCTGGTGGGAGCTCTG
GGCAGCTGGCCTACAGACGTTCCCTTAGTGCTGGCGGGTAGGTTTGAATCATCACGCAGGCCCTGGCCTCC
ACCCGCCCCCACCAGCCCCCTGGCCTCAGTTCCCTGGCAACATCTGGGGTTGGGGGGCAGCAGGAACAA
GGGCTCTGTCTGCCAGCTGCCTCCCCCTTTGGGTTTGGCCAGACTCCACAGTGCATACGTGGGCTCCA

(57) Abstract: Disclosed are chimeric zinc finger proteins that can regulate endogenous genes. Examples of such proteins include proteins that can regulate VEGF-A expression. The proteins and nucleic acid encoding them can be used to modulate angiogenesis.

WO 2004/053130 A1